IN THE CLAIMS:

Cancel claims 1-20 without prejudice and add the following new claims in lieu thereof.

--21. A method of assaying for peptide-specific effector T-cells, which method comprises providing a fluid containing T-cells, presenting to the T cells one or more T cell activating peptides, incubating the fluid to cause cytokine release, and detecting the released cytokine, wherein incubation is continued for a time to permit cytokine release by only those T-cells that have been pre-sensitized *in vivo* to the peptide and are capable of immediate effector function without the need to effect division/differentiation by *in vitro* culture in the presence of the peptide.

22. The method as claimed in claim 21, wherein the fluid is in contact with a surface carrying an immobilized first antibody to the cytokine, and the cytokine is detected in the form of being bound to the immobilized first antibody.

23. The method as claimed in claim 21 wherein one or more peptides derived from ESAT-6 of *M. tuberculosis* are presented to the T cells.

24. The method as claimed in claim 21, wherein the T-cells are peripheral blood monoclonuclear cells.

25. The method as claimed in claim 21, wherein the peptide-specific effector T-cells are CD8+ or CD4+ cells and the cytokine is IFN-γ.

26. The method as claimed in claim 21, wherein a peptide of 7-15 amino acid residues in length is added to the T-cell containing fluid.

27. The method as claimed in claim 21, wherein the resulting fluid mixture is incubated under non-sterile conditions.

28. The method as claimed in claim 21, wherein the peptide is a known epitope.

29. The method as claimed in claim 21, wherein the fluid contains fresh T-cells that have not been cultured *in vitro*.

30. The method as claimed in claim 21, wherein incubation is continued for a time of 4 to 24 hours.

31. The method as claimed in claim 21, wherein the T-cells are taken from a patient known to be suffering, or to have suffered, from infection with a pathogen.

32. The method as claimed in claim 21, wherein said method is performed to monitor progress of HIV infection.

33. The method as claimed in claim 21, wherein said method is performed to monitor the effect of a vaccine.

34. The method as claimed in claim 21, wherein said method is performed to determine a pathogen-derived epitope targeted by CD4+ or CD8+ T cells.

35. The method as claimed in claim 21, wherein said method is applied to the study or diagnosis or monitoring